

## Commissioned Insights for Current Delta Decisions

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Establishing a complete scientific and technical basis for deciding on the long-term future of the Delta will not be possible within the 18-month time frame of the Delta Vision effort. However, existing scientific and technical knowledge can be used to identify the most promising alternatives and to support the policy process, extending the findings of the PPIC-UC Davis report. One way to obtain this information is to commission a series of short reports by expert panels. Specific topics would be addressed by scientific and technical experts unaffiliated with major Delta stakeholders. The reports would summarize the implications of current scientific and technical knowledge for Delta Vision decisions.

Reports would be commissioned under the authority of the California Resources Agency, with management and quality control by the CALFED Science Program or the University of California. Total costs would be from \$1-3 million over 6-10 months.

### **Panel Reports on Delta Solution Insights:**

Some ideas for a series of panel reports are summarized below. The first two categories would be of the most immediate use for the Delta Vision and other processes. The scarcity of eminent non-stakeholder experts to lead these efforts limits the number of panels able to complete reports in the coming months.

#### **1) Strategic Comparisons of Promising Delta Management Alternatives**

Major long-term Delta alternatives would be compared from perspectives not explicitly examined in the PPIC-UC Davis report. These panels would focus mainly on long-term risks from environmental, ecosystem, and drinking water quality and cost perspectives.

- a) *Achieving long-term flexibility for environmental management.* Mixed panel
- b) *Long-term risks from sea level rise and climate change.* Mixed panel.
- c) *Long-term risks from invasive species.* Panel of biologists.
- d) *Treatment costs for current and anticipated drinking water standards.* Mixed panel, mostly treatment engineers.

#### **2) Institutional Policies**

Institutional options for guaranteeing and implementing a long-term Delta solution would be identified and summarized. Some would be recommended for consideration.

- a) *Institutional and legal options for guaranteeing major Delta agreements.* Panel of lawyers and economists, with some engineering and operations experts.
- b) *Economic and legal mechanisms for: a) cost recovery, b) tradable capacity rights, c) financing environmental demands, d) mitigation payments, e) bidding systems for new projects.* Panel of economists, with some lawyers and others.

#### **3) Delta Environmental Management**

These panels would begin developing strategic ideas for effective management of the Delta ecosystem and for reducing water supply impacts on the Delta ecosystem. The initial focus would be on providing a better future for desirable fishes, especially threatened species.

a) *Suisun Marsh and Cache Slough restoration opportunities*. Summarize current biological, ecological, and hydrodynamic thinking on these opportunities, to serve as a basis for short-term ecosystem support actions. Mixed panel.

b) *Near-term, no regrets Delta flow modifications to facilitate ecosystem and export project performance*. Develop Delta modifications that allow increased salinity variability, improve ocean/river connectivity to the San Joaquin River, and reduce entrainment of delta smelt and San Joaquin River salmon smolts, while minimizing impacts on water exports. Panel of engineers, biologists and hydrodynamicists.

c) *Fitting different areas of the Delta to ecosystem functions*. Different areas of the Delta are likely to best serve different ecological functions. This report would summarize current thinking on this issue. Panel of biologists and hydrodynamicists.

#### **4) Salinity Fluctuations for the Bay-Delta System**

Salinity variability is one aspect of the Delta's ecosystem and a promising tool for ecosystem management. These panels would begin a systematic examination of this approach, but their conclusions seem less urgently relevant for Delta Vision decisions.

a) *Contemporary salinity fluctuations in the Bay-Delta system*. Using field data and modeling results, this panel would estimate extent and frequency of salinity fluctuations in the current Bay-Delta system. Mixed panel, mostly water quality engineers and hydrodynamicists.

b) *Historical extent and frequency of salinity fluctuations in the Bay-Delta system*. This panel would estimate past conditions using historical data and modeling. Panel of biologists, hydrodynamicists, and perhaps a historian.

c) *Biological aspects of salinity fluctuations for native, introduced, and invasive species*. This panel would summarize knowledge and major uncertainties of water quality characteristics – concentrations, frequencies, and durations – desired and tolerated by various species in the Bay-Delta system. Panel primarily of biologists.

d) *Diversion implications of selected salinity fluctuation policies* –Summarize effects of alternative policies on water export availability with a) current export locations and b) exports occurring on the Sacramento River at Hood, in terms of water delivery reliability. Team of biologists, hydrodynamicists, and operators to suggest fluctuation policies. Operational modeling to be done by consultants or DWR operations experts.